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**A CUMULATIVE INDEX  
TO  
A CONTINUING BIBLIOGRAPHY ON**

**AEROSPACE MEDICINE  
AND BIOLOGY**

This Cumulative Index supersedes the indexes contained in supplements [SP-7011(320) through SP-7011(331)] published by NASA during 1989.



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# INTRODUCTION

## WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7011(320) through NASA SP-7011(331) of *Aerospace Medicine and Biology: A Continuing Bibliography*, NASA SP-7011, and by means of supplements, serves as a current abstracting and announcement journal for references on bioscience and biotechnology. It has been compiled through the cooperative efforts of the American Institute of Aeronautics and Astronautics (AIAA), and the National Aeronautics and Space Administration (NASA). Entries prepared by the two contributing organizations are identified as follows:

1. NASA entries by their *STAR* accession numbers (N89-10000).
2. AIAA entries by their *IAA* accession numbers (A89-10000 series).

## HOW THIS CUMULATIVE INDEX IS ORGANIZED

This Cumulative Index includes a subject, personal author, corporate source, foreign technology, contract number, report number, and accession number index.

## HOW TO USE THE SUBJECT INDEX

Two types of cross-references appear in the subject index:

1. Use (U) references indicate that the subject term is not "postable," i.e., not a valid term, and that the following term or terms are used instead. For example:

DOSE

U DOSAGE

AIRLINERS

U COMMERCIAL AIRCRAFT

U PASSENGER AIRCRAFT

2. Narrower Term (NT) references refer the user to more specific headings in the same subject area, under which additional material on the subject may be found. For example:

FATIGUE (BIOLOGY)

NT AUDITORY FATIGUE

NT FLIGHT FATIGUE

NT MUSCULAR FATIGUE

In addition, a searcher may use the title or title and title extension in the index to narrow further his quest for particular items; this is because subject terms may include documents on different aspects of the same subject term. For example:

BIOLOGICAL EFFECT

Vibratory force effect upon biological systems, particularly human organism.

Biological effect of cosmic and solar radiations on human body at high altitudes.

## HOW TO USE THE PERSONAL AUTHOR INDEX

All personal authors used in the abstract-section citations in the individual Supplements appear in the index. Differences in translation schemes may require multiple searching on the index for variants of an author's name. For example:

EMELIANOV, M. D.

and

YEMELYANOV, M. D.

## HOW TO USE THE CORPORATE SOURCE INDEX

The corporate source index entries are abridged versions of the corporate sources used in the abstract-section citations in the individual Supplements. The corporate source supplementary (organizational component) does not appear in the index. For example:

BOEING CO., SEATTLE, WASH. MILITARY AIRCRAFT SYSTEMS DIV. (Source citation entry)

BOEING CO., SEATTLE, WASH. (Source index entry)



## HOW TO USE THE FOREIGN TECHNOLOGY INDEX

The foreign technology index identifies research performed outside of the United States. Listings in this index are arranged alphabetically by country of intellectual origin. For example:

CHINA, PEOPLE'S REPUBLIC OF

## HOW TO USE THE CONTRACT NUMBER INDEX

All contract numbers that are identified in the abstract-section citations in the individual Supplements appear in this index. Changes by agencies in the style in which contract numbers are presented may require multiple searching for variants. For example:

AF 33(615)-71-C-1758

F33615-71-C-1758

## HOW TO USE THE REPORT/ACCESSION NUMBER INDEX

All report numbers that have been assigned by the corporate source, monitoring agency or cataloging activity appear in this index. Variations in cataloging may result in different report number series. For example:

TP-924

ONERA-TP-924

## IDENTIFICATION OF DESIRED SUPPLEMENT

The abstract and descriptive cataloging for any accession number selected from the indexes may be found in the appropriate Supplement. The page-number range of each Supplement appears on the inside front cover of this index. Once the range of page numbers containing the selected accession number is located in the second column, the desired supplement number will be found in the first column. For example:

Page 138 will be found in Supplement 325

## AVAILABILITY OF DOCUMENTS

Information concerning the availability of documents announced in *Aerospace Medicine & Biology* is found in the Introduction to the most currently issued *Supplement*.

## PUBLIC COLLECTIONS OF NASA DOCUMENTS

**DOMESTIC:** NASA and NASA-sponsored documents and a large number of aerospace publications are available to the public for reference purposes at the library maintained by the American Institute of Aeronautics and Astronautics, Technical Information Service, 555 West 57th Street, 12th Floor, New York, New York 10019.

**EUROPEAN:** An extensive collection of NASA and NASA-sponsored publications is maintained by the British Library Lending Division, Boston Spa, Wetherby, Yorkshire, England for public access. The British Library Lending Division also has available many of the non-NASA publications cited in *STAR*. European requesters may purchase facsimile copy or microfiche of NASA and NASA-sponsored documents, those identified by both the symbols # and \* from ESA — Information Retrieval Service European Space Agency, 8-10 rue Mario-Nikis, 75738 CEDEX 15, France.

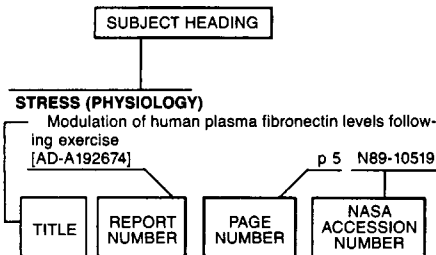
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In order to provide the general public with greater access to U.S. Government publications, Congress established the Federal Depository Library Program under the Government Printing Office (GPO), with 50 regional depositories responsible for permanent retention of material, inter-library loan, and reference services. At least one copy of nearly every NASA and NASA-sponsored publication, either in printed or microfiche format, is received and retained by the 50 regional depositories. A list of the regional GPO libraries, arranged alphabetically by state, appears on the inside back cover. These libraries are *not* sales outlets. A local library can contact a Regional Depository to help locate specific reports, or direct contact may be made by an individual.

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## Typical Subject Index Listing



The subject heading is a key to the subject content of the document. The title is used to provide a description of the subject matter. When the title is insufficiently descriptive of document content, a title extension is added, separated from the title by three hyphens. The (NASA or AIAA) accession number and the page number are included in each entry to assist the user in locating the abstract in the abstract section. If applicable, a report number is also included as an aid in identifying the document. Under any one subject heading, the accession numbers are arranged in sequence with the AIAA accession numbers appearing first.

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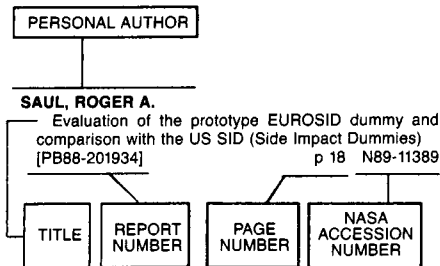
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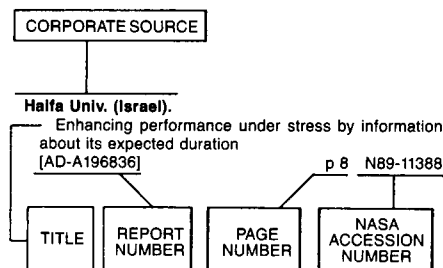
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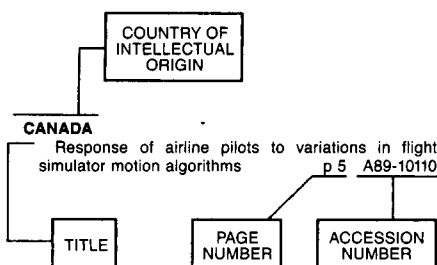
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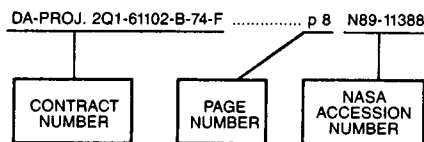
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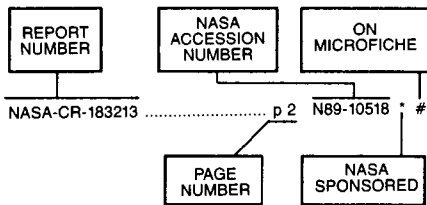
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AD-A206919	p 233	N89-26395	#	AFIT/GE/ENG/88D-45	p 160	N89-21465	#	AI-A PAPER 89-3562	p 279	A89-52647	#
AD-A206923	p 218	N89-26375	#	AFIT/GE/ENG/88D-7	p 167	N89-21483	#	AI-A PAPER 89-5044	p 250	A89-48155	#
AD-A206948	p 227	N89-26386	#	AFIT/GE/ENG/88D-8	p 188	N89-23067	#	AI-A PAPER 89-5062	p 241	A89-48173	#
AD-A206959	p 233	N89-26396	#								
AD-A206996	p 251	N89-27341	#	AFIT/GEO/ENG/88D-4	p 160	N89-21466	#	AMSEL-NV-TR-0075	p 205	N89-24047	#
AD-A207041	p 228	N89-26387	#								
AD-A207078	p 234	N89-26397	#	AFIT/GSM/LS/88S-12	p 128	N89-19798	#	AR-004-592	p 144	N89-19810	#
AD-A207127	p 228	N89-26388	#								
AD-A207129	p 228	N89-26389	#	AFIT/GSO/ENG/88D-2	p 179	N89-23065	#	ARDG(E)-R/D-4624-CC-01	p 35	N89-12194	#
AD-A207131	p 225	N89-26382	#								
AD-A207151	p 225	N89-26383	#	AFOSR-88-0696TR	p 71	N89-15502	#	ARI-A-88-36	p 186	N89-22321	#
AD-A207241	p 251	N89-27342	#	AFOSR-88-0726TR	p 36	N89-13139	#				
AD-A207248	p 245	N89-27331	#	AFOSR-88-0740TR	p 55	N89-13877	#	ARI-RN-88-106	p 259	N89-28302	#
AD-A207676	p 273	N89-29947	#	AFOSR-88-0784TR	p 56	N89-14672	#	ARI-RN-88-34	p 88	N89-16270	#
AD-A207848	p 276	N89-29011	#	AFOSR-88-0806TR	p 99	N89-17394	#	ARI-RN-88-47	p 36	N89-13138	#



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				NAS 1.26:184753	p 144	N89-19807	#	NASA-CR-184769	p 95	N89-17996	#
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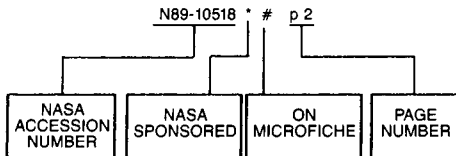
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A89-29110	p 138	A89-32216	p 122	A89-38264	p 185	A89-43713 *	p 228	A89-46555	p 212
A89-29289 *	p 121	A89-32217	p 122	A89-38265	p 185	A89-43720 *	p 228	A89-46583	p 236
A89-29291 *	p 121	A89-32218	p 123	A89-38270	p 185	A89-43775	p 209	A89-47327	p 232
A89-29302 *	p 121	A89-32312 *	# p 125	A89-38272	p 180	A89-44065	p 209	A89-47329	p 226
A89-29304 *	p 138	A89-32318 *	# p 143	A89-38273	p 185	A89-44075	p 209	A89-47330	p 226
A89-29308 *	p 124	A89-32321 *	p 126	A89-38276	p 185	A89-44166	p 235	A89-47331	p 226
A89-29314 *	p 130	A89-32323 *	p 126	A89-38277	p 185	A89-44184	p 209	A89-47332 *	p 227
A89-29322 *	p 124	A89-32340	p 126	A89-38278	p 185	A89-44295	p 218	A89-47333	p 227
A89-29734	p 139	A89-32341 *	p 126	A89-38279	p 186	A89-44296 *	p 229	A89-47419	p 223
A89-29735	p 130	A89-32342 *	p 123	A89-38280	p 186	A89-44297 *	p 229	A89-47420 *	p 212
A89-29736	p 130	A89-32344	p 123	A89-38281	p 186	A89-44376	p 218	A89-48085	p 241
A89-29739	p 139	A89-32345	p 123	A89-38282	p 186	A89-44377 *	p 218	A89-48155 *	# p 250
A89-29757 #	p 125	A89-32346	p 126	A89-38346	p 171	A89-44489	p 235	A89-48173 *	# p 241
A89-29762 #	p 139	A89-32347	p 126	A89-38347	p 175	A89-44496	p 235	A89-48276	p 250
A89-30071	p 121	A89-32348	p 127	A89-38348	p 171	A89-44500	p 235	A89-48285	p 241
A89-30072	p 121	A89-32349	p 127	A89-38349	p 172	A89-44501	p 209	A89-48286	p 241
A89-30073	p 121	A89-32350	p 127	A89-38350	p 172	A89-44502 *	p 235	A89-48294 *	p 241
A89-30074	p 125	A89-32749	p 151	A89-38351	p 172	A89-44503	p 209	A89-48296 *	p 239
A89-30075	p 122	A89-32750	p 151	A89-38352	p 172	A89-44504	p 235	A89-48374 *	p 248
A89-30088	p 125	A89-32757	p 151	A89-38353	p 172	A89-44505 *	p 235	A89-48375 *	p 248
A89-30142	p 130	A89-32758	p 151	A89-38354	p 172	A89-44646 #	p 229	A89-48383 *	# p 241
A89-30143	p 125			A89-38355	p 172			A89-48384 #	p 242

A89-48437	#	p 249	A89-52955	p 285	N89-12167	* #	p 22	N89-13899	* #	p 65	N89-16257	#	p 77
A89-48569	* #	p 250	A89-52956	p 285	N89-12168	#	p 23	N89-13900	* #	p 68	N89-16258	#	p 77
A89-48710	p 239		A89-52957	p 267	N89-12169	#	p 23	N89-14155	* #	p 48	N89-16259	#	p 77
A89-48711	p 239		A89-53227	p 280	N89-12170	#	p 23	N89-14164	* #	p 65	N89-16260	#	p 77
A89-48817	* #	p 242	A89-53319	* #	N89-12171	#	p 28	N89-14167	* #	p 48	N89-16261	#	p 77
A89-48818	p 249		A89-53328	* #	N89-12172	#	p 28	N89-14658	#	p 48	N89-16262	#	p 78
A89-48819	p 242		A89-53422	p 280	N89-12173	#	p 29	N89-14659	#	p 48	N89-16263	#	p 83
A89-48820	p 242		A89-53455	#	N89-12174	#	p 29	N89-14660	#	p 55	N89-16264	#	p 84
A89-48821	p 242		A89-53463	* #	N89-12175	#	p 29	N89-14661	#	p 48	N89-16265	#	p 84
A89-48822	p 242		A89-53464	p 280	N89-12176	#	p 29	N89-14662	#	p 48	N89-16266	#	p 84
A89-48823	p 243		A89-53465	* #	N89-12177	#	p 29	N89-14663	#	p 49	N89-16267	#	p 84
A89-48824	p 243		A89-53659	#	N89-12178	#	p 30	N89-14664	#	p 49	N89-16268	#	p 84
A89-48825	p 249		A89-53698	* #	N89-12179	* #	p 30	N89-14665	#	p 49	N89-16269	#	p 85
A89-48898	p 243		A89-53699	* #	N89-12180	#	p 30	N89-14666	* #	p 49	N89-16270	#	p 88
A89-49010	p 250		A89-53700	* #	N89-12181	#	p 30	N89-14667	#	p 49	N89-16271	#	p 88
A89-49173	p 260		A89-53828	* #	N89-12182	#	p 31	N89-14668	#	p 55	N89-16272	#	p 88
A89-49799	p 243		A89-53831	* #	N89-12183	#	p 31	N89-14669	#	p 55	N89-16273	* #	p 88
A89-49800	p 243		A89-54201	p 267	N89-12184	* #	p 31	N89-14670	#	p 55	N89-16274	* #	p 88
A89-50064	#	p 251	A89-54202	p 267	N89-12185	#	p 31	N89-14671	#	p 56	N89-17034	#	p 98
A89-50454	* #	p 251	A89-54203	p 267	N89-12186	#	p 31	N89-14672	#	p 56	N89-17035	#	p 98
A89-50573	p 249		A89-54204	p 268	N89-12187	#	p 31	N89-14673	#	p 56	N89-17036	#	p 94
A89-50736	p 239		A89-54205	p 268	N89-12188	* #	p 32	N89-14674	#	p 56	N89-17044	#	p 98
A89-50737	p 239		A89-54206	p 268	N89-12189	#	p 32	N89-14675	* #	p 56	N89-17389	#	p 95
A89-50738	p 243		A89-54207	p 268	N89-12190	#	p 32	N89-14676	* #	p 57	N89-17390	* #	p 95
A89-50739	p 243		A89-54208	p 268	N89-12191	#	p 32	N89-14677	* #	p 57	N89-17392	* #	p 98
A89-50740	p 243		A89-54209	p 268	N89-12192	* #	p 32	N89-14678	#	p 59	N89-17393	* #	p 99
A89-50741	p 244		A89-54210	p 269	N89-12193	#	p 33	N89-14679	p 59		N89-17394	#	p 99
A89-50742	p 244		A89-54211	p 269	N89-12194	#	p 35	N89-14680	#	p 59	N89-17395	#	p 99
A89-50743	p 244		A89-54212	* #	N89-12195	#	p 35	N89-14681	#	p 59	N89-17396	#	p 99
A89-50744	p 244		A89-54213	p 269	N89-12196	#	p 36	N89-14682	#	p 59	N89-17397	#	p 99
A89-50803	* #	p 249	A89-54214	p 269	N89-12197	#	p 36	N89-14683	* #	p 59	N89-17398	#	p 100
A89-50866	p 244		A89-54215	p 270	N89-12198	#	p 38	N89-14684	* #	p 66	N89-17399	#	p 100
A89-50867	p 244		A89-54216	* #	N89-12199	* #	p 38	N89-14685	#	p 66	N89-17400	#	p 102
A89-50900	p 244		A89-54217	p 270	N89-12200	#	p 38	N89-14686	#	p 66	N89-17401	#	p 102
A89-50925	p 239		A89-54218	p 270	N89-12201	#	p 39	N89-14687	#	p 66	N89-17402	#	p 113
A89-51013	p 244		A89-54219	p 270	N89-12202	#	p 39	N89-14688	#	p 66	N89-17403	* #	p 113
A89-51501	* #	p 260	A89-54220	p 270	N89-12203	#	p 39	N89-14689	#	p 66	N89-17404	* #	p 113
A89-51502	p 260		A89-54221	p 271	N89-12204	#	p 39	N89-14690	#	p 67	N89-17996	* #	p 95
A89-51503	p 260		A89-54222	p 271	N89-12205	#	p 39	N89-14691	* #	p 67	N89-17997	* #	p 95
A89-51504	p 260		A89-54223	p 271	N89-12206	* #	p 40	N89-14692	#	p 67	N89-17998	#	p 95
A89-51505	p 260		A89-54224	p 271	N89-12207	* #	p 40	N89-14693	* #	p 67	N89-17999	#	p 95
A89-51506	p 261		A89-54225	p 271	N89-12208	#	p 40	N89-14920	* #	p 67	N89-18000	#	p 100
A89-51507	p 261		A89-54226	p 281	N89-12762	#	p 40	N89-15017	* #	p 49	N89-18001	#	p 100
A89-51508	p 261		A89-54227	* #	N89-12765	#	p 36	N89-15131	#	p 70	N89-18002	#	p 100
A89-51509	p 261		A89-54228	p 281	N89-12769	#	p 23	N89-15132	#	p 70	N89-18003	#	p 100
A89-51510	* #	p 261	A89-54229	p 281	N89-12770	#	p 36	N89-15133	#	p 70	N89-18004	#	p 100
A89-51511	p 261		A89-54230	* #	N89-12772	#	p 23	N89-15136	#	p 70	N89-18005	#	p 100
A89-51512	p 262		A89-54231	* #	N89-12776	#	p 40	N89-15500	#	p 71	N89-18006	#	p 101
A89-51513	p 239		A89-54232	p 282	N89-13130	#	p 23	N89-15501	* #	p 71	N89-18007	* #	p 102
A89-51514	p 240		A89-54234	p 282	N89-13131	* #	p 24	N89-15502	#	p 71	N89-18008	#	p 103
A89-51515	p 240		A89-54235	p 282	N89-13132	#	p 33	N89-15503	#	p 71	N89-18009	#	p 113
A89-51516	p 240		A89-54236	* #	N89-13133	#	p 33	N89-15504	#	p 71	N89-18010	#	p 113
A89-51517	p 262		A89-54237	* #	N89-13134	#	p 33	N89-15505	#	p 72	N89-18011	#	p 114
A89-51520	* #	p 262	A89-54238	* #	N89-13135	#	p 33	N89-15506	* #	p 72	N89-18012	#	p 114
A89-51521	* #	p 262	A89-54239	p 272	N89-13136	#	p 33	N89-15507	#	p 72	N89-18013	#	p 114
A89-51522	* #	p 262	A89-54249	p 282	N89-13137	#	p 36	N89-15508	* #	p 74	N89-18014	#	p 114
A89-51523	* #	p 262	A89-54375	* #	N89-13138	#	p 36	N89-15509	#	p 74	N89-18015	#	p 114
A89-51524	* #	p 263	A89-54522	p 272	N89-13139	#	p 36	N89-15510	#	p 74	N89-18016	#	p 114
A89-51525	* #	p 263	A89-54523	p 278	N89-13140	#	p 37	N89-15511	#	p 75	N89-18017	#	p 115
A89-51527	* #	p 263	A89-54626	p 272	N89-13141	* #	p 40	N89-15512	#	p 75	N89-18018	#	p 115
A89-51528	* #	p 263	A89-54627	p 272	N89-13142	#	p 40	N89-15513	* #	p 75	N89-18019	#	p 115
A89-51529	* #	p 263	A89-54628	p 272	N89-13143	#	p 41	N89-15514	#	p 75	N89-18020	#	p 115
A89-51751	* #	p 273	A89-54629	p 275	N89-13144	* #	p 41	N89-15515	#	p 75	N89-18021	#	p 115
A89-51752	p 273		A89-54888	p 272	N89-13866	#	p 47	N89-15516	* #	p 75	N89-18022	#	p 115
A89-51753	p 274				N89-13867	* #	p 47	N89-15517	* #	p 76	N89-18023	#	p 115
A89-51754	p 274		N89-10088	* #	N89-13868	#	p 47	N89-15518	#	p 80	N89-18024	#	p 116
A89-51854	p 265		N89-10089	* #	N89-13869	#	p 47	N89-15519	#	p 80	N89-18025	#	p 116
A89-51892	p 274		N89-10090	* #	N89-13870	#	p 53	N89-15520	#	p 81	N89-18026	#	p 116
A89-52058	* #	p 265	N89-10091	* #	N89-13871	#	p 54	N89-15521	#	p 81	N89-18027	#	p 116
A89-52059	* #	p 265	N89-10092	* #	N89-13872	* #	p 54	N89-15522	#	p 81	N89-18028	#	p 116
A89-52060	* #	p 284	N89-10093	* #	N89-13873	#	p 54	N89-15523	#	p 81	N89-18029	#	p 116
A89-52061	* #	p 284	N89-10094	* #	N89-13874	#	p 54	N89-15524	#	p 81	N89-18030	#	p 116
A89-52062	p 265		N89-10095	* #	N89-13875	#	p 54	N89-15525	#	p 81	N89-18031	#	p 117
A89-52063	p 265		N89-10098	* #	N89-13876	#	p 54	N89-15526	#	p 82	N89-18032	#	p 117
A89-52080	p 265		N89-10101	* #	N89-13877	#	p 55	N89-15527	#	p 82	N89-18033	#	p 117
A89-52197	* #	p 266	N89-10102	* #	N89-13878	#	p 55	N89-15528	#	p 82	N89-18034	#	p 117
A89-52200	* #	p 266	N89-10104	* #	N89-13879	* #	p 55	N89-15529	* #	p 82	N89-18035	* #	p 117
A89-52345	p 284		N89-10463	#	N89-13880	#	p 57	N89-15530	* #	p 82	N89-18036	#	p 117
A89-52560	#	p 279	N89-10464	#	N89-13881	#	p 58	N89-15531	* #	p 83	N89-18037	* #	p 118
A89-52610	#	p 279	N89-10518	* #	N89-13882	#	p 58	N89-15532	* #	p 83	N89-18038	* #	p 118
A89-52647	* #	p 279	N89-10519	#	N89-13883	#	p 58	N89-15533	#	p 83	N89-18039	* #	p 118
A89-52713	#	p 279	N89-10520	#	N89-13884	#	p 58	N89-15534	* #	p 83	N89-18040	#	p 118
A89-52772	p 285		N89-10521	#	N89-13885	#	p 58	N89-15535	* #	p 87	N89-18041	#	p 118
A89-52773	p 266		N89-10522	* #	N89-13886	* #	p 63	N89-15536	#	p 87	N89-18042	#	p 119
A89-52774	p 266		N89-10523	#	N89-13887	#	p 63	N89-15537	#	p 87	N89-18043	#	p 119
A89-52806	p 278		N89-11383	#	N89-13888	* #	p 63	N89-15538	#	p 87	N89-18044	#	p 119
A89-52807	p 266		N89-11384	* #	N89-13889	* #	p 64	N89-15539	#	p 87	N89-18379	* #	p 119
A89-52808	p 266		N89-11385	#	N89-13890	#	p 64	N89-15826	* #	p 89	N89-18381	* #	p 101
A89-52809	p 266		N89-11386	#	N89-13891	#	p 64	N89-16249	#	p 72	N89-18391	* #	p 119
A89-52810	p 267		N89-11387	#	N89-13892	#	p 64	N89-16250	#	p 72	N89-18394	* #	p 103
A89-52881	p 267		N89-11388	#	N89-13893	* #	p 64	N89-16251	#	p 76	N89-18396	* #	p 95
A89-52882	p 267		N89-11389	#	N89-13894	* #	p 64	N89-16252	#	p 76	N89-18404	* #	p 119
A89-52951	p 285		N89-11390	#	N89-13895	* #	p 65	N89-16253	#	p 76	N89-18405	* #	p 119
A89-52952	p 285		N89-11391	#	N89-13896	* #	p 65	N89-16254	#	p 76	N89-18440	#	p 143
A89-52953	p 285		N89-11392	#	N89-13897	* #							



N89-19104	#	p 123	N89-21301	* #	p 154	N89-24022	* #	p 194	N89-26370	* #	p 237	N89-28248	#	p 257
N89-19108	#	p 127	N89-21304	* #	p 154	N89-24023	* #	p 194	N89-26372	* #	p 217	N89-28249	#	p 257
N89-19109	#	p 127	N89-21324	* #	p 154	N89-24024	* #	p 197	N89-26373	* #	p 217	N89-28250	#	p 257
N89-19110	#	p 127	N89-21325	* #	p 154	N89-24025	#	p 197	N89-26374	#	p 217	N89-28262	* #	p 257
N89-19111	#	p 124	N89-21329	* #	p 155	N89-24026	#	p 197	N89-26375	#	p 218	N89-28263	#	p 258
N89-19112	#	p 124	N89-21354	* #	p 155	N89-24027	#	p 197	N89-26376	#	p 224	N89-28264	#	p 258
N89-19113	#	p 124	N89-21357	* #	p 155	N89-24028	#	p 197	N89-26377	#	p 224	N89-28265	#	p 258
N89-19114	#	p 127	N89-21363	* #	p 155	N89-24029	#	p 198	N89-26378	#	p 224	N89-28284	#	p 258
N89-19116	#	p 143	N89-21367	* #	p 155	N89-24030	#	p 198	N89-26379	#	p 224	N89-28285	#	p 258
N89-19118	#	p 124	N89-21380	* #	p 156	N89-24031	#	p 198	N89-26380	#	p 224	N89-28286	#	p 258
N89-19119	#	p 127	N89-21385	* #	p 156	N89-24032	#	p 198	N89-26381	#	p 225	N89-28298	#	p 258
N89-19120	*	p 128	N89-21390	* #	p 156	N89-24033	* #	p 200	N89-26382	#	p 225	N89-28299	#	p 259
N89-19121	*	p 128	N89-21396	* #	p 156	N89-24034	#	p 200	N89-26383	#	p 225	N89-28300	#	p 259
N89-19122	#	p 137	N89-21404	* #	p 157	N89-24035	#	p 201	N89-26384	#	p 225	N89-28301	#	p 259
N89-19123	#	p 137	N89-21406	* #	p 157	N89-24036	#	p 201	N89-26385	#	p 227	N89-28302	#	p 259
N89-19124	#	p 137	N89-21412	* #	p 157	N89-24037	#	p 201	N89-26386	#	p 227	N89-28303	#	p 259
N89-19125	#	p 137	N89-21461	#	p 157	N89-24038	#	p 201	N89-26387	#	p 228	N89-28304	* #	p 263
N89-19126	#	p 137	N89-21462	#	p 159	N89-24039	#	p 201	N89-26388	#	p 228	N89-29007	#	p 275
N89-19127	#	p 143	N89-21463	* #	p 159	N89-24040	#	p 202	N89-26389	#	p 228	N89-29008	#	p 275
N89-19128	#	p 143	N89-21464	#	p 160	N89-24041	#	p 202	N89-26390	#	p 228	N89-29009	#	p 275
N89-19795	#	p 124	N89-21465	#	p 160	N89-24042	#	p 202	N89-26391	* #	p 233	N89-29010	#	p 276
N89-19796	#	p 128	N89-21466	#	p 160	N89-24043	#	p 204	N89-26392	* #	p 233	N89-29011	#	p 276
N89-19797	#	p 128	N89-21467	#	p 160	N89-24044	* #	p 204	N89-26393	* #	p 233	N89-29012	#	p 276
N89-19798	#	p 128	N89-21468	#	p 160	N89-24045	#	p 204	N89-26394	#	p 233	N89-29013	#	p 276
N89-19799	#	p 128	N89-21469	#	p 160	N89-24046	#	p 205	N89-26395	#	p 233	N89-29014	#	p 276
N89-19800	#	p 129	N89-21470	#	p 160	N89-24047	#	p 205	N89-26396	#	p 233	N89-29015	#	p 277
N89-19801	#	p 129	N89-21471	#	p 161	N89-24048	#	p 205	N89-26397	#	p 234	N89-29016	* #	p 277
N89-19802	#	p 129	N89-21472	#	p 161	N89-24049	#	p 205	N89-26398	* #	p 234	N89-29017	* #	p 277
N89-19803	#	p 129	N89-21473	#	p 161	N89-24050	#	p 205	N89-26532	* #	p 234	N89-29018	#	p 277
N89-19804	#	p 129	N89-21474	#	p 161	N89-24354	#	p 205	N89-26533	* #	p 234	N89-29019	#	p 278
N89-19805	#	p 138	N89-21475	*	p 161	N89-24362	#	p 206	N89-26540	* #	p 234	N89-29020	* #	p 279
N89-19806	#	p 138	N89-21476	*	p 161	N89-24369	#	p 199	N89-27327	#	p 240	N89-29021	#	p 283
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